GEOCHEMICAL REPORT

ON THE

WITCH NORTH CLAIM GROUP

(WN 1-4 Mineral Claims)

OMINECA MINING DIVISION

N.T.S. 93 N/02

Latitude: 55° 10'N
Longitude: 124° 30'W

NORANDA EXPLORATION COMPANY, LIMITED
(no personal liability)

REPORT BY: TERRY CAMPBELL

MARCH, 1990

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SUMMARY

In the winter of 1989, the Witch North claim group was staked by Noranda personnel to cover an indicated airborne mag anomaly. During the 1989 field season, seven recon soil lines, totalling 25.55 kilometres were established on the property. 229 soil samples were collected at 50 metre interval spacings and analyzed for gold and copper. 27 samples proved to be anomalous for copper and 8 samples were anomalous for gold. The results are sufficient to warrant further work on the property.

INTRODUCTION

The Witch North claim group was staked in early spring of 1989 to cover an airborne mag high identified by a government map. Interest in the area is spurred on by the Mount Milligan discovery approximately 25 km to the east. The area is underlain by Upper Triassic to Lower Jurassic Takla Group volcanics and sediments that have been intruded by Triassic to Cretaceous stocks and dykes. The stock volcanic/sediment contact and surrounding area is the potential host site for a copper and gold porphyry deposit.

LOCATION AND ACCESS

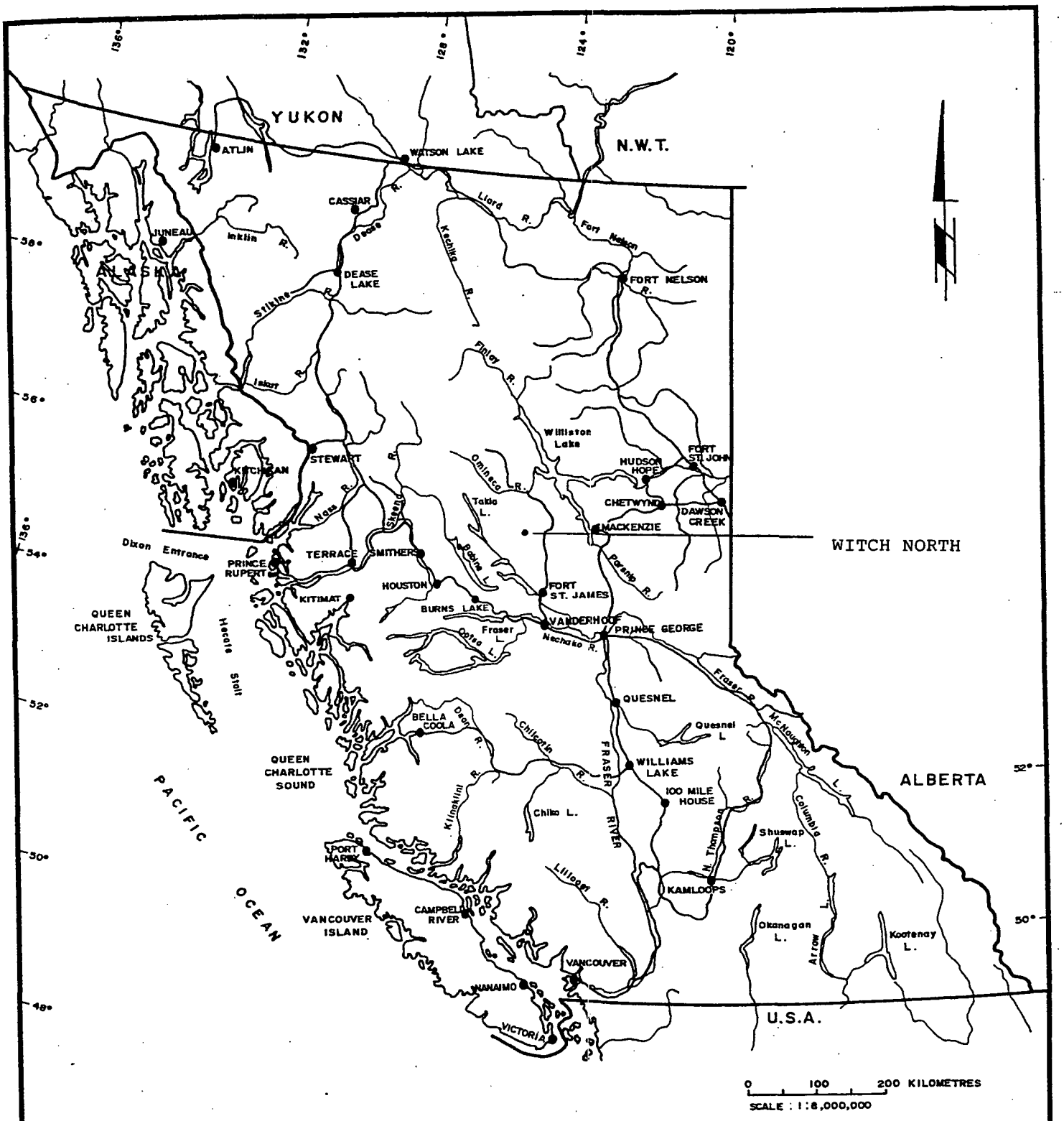
The Witch North group of claims is located between Chuchi and Witch Lakes, approximately 180 km northwest of Prince George. Access to the property is achieved by crossing Chuchi lake by boat. The property is also accessible by float plane or helicopter from Ft. St. James. The claims are described as being centred at 55 degrees 10' N and 124 degrees 30' W on NTS 93 N/02 in the Omineca Mining Division.

CLAIM STATISTICS

NAME	RECORD #	UNITS	RECORD DATE	OWNER
WN-1	10170	16	Feb. 14, 1989	Norex
WN-2	10171	20	Feb. 14, 1989	Norex
WN-3	10172	20	Feb. 14, 1989	Norex
WN-4	10173	20	Feb. 25, 1989	Norex

TOPOGRAPHY AND VEGETATION

The topography is characterized by low rolling glacially rounded hills and outcrop ridges. The elevation ranges from 868 to 1329 metres. The vegetation consists of mature stands of spruce, pine and fir trees with some low lying areas as swamps. Undergrowth ranges from nonexistent to thick alders, brush and devils' club.



REVISED	WITCH NORTH
	LOCATION MAP
PROJ. No.	SURVEY BY: T. Campbell DATE: March 90
N.T.S.	DRAWN BY: S.K.B. SCALE: 1:8,000,000
DWG. No. 1	NORANDA EXPLORATION
	OFFICE: PRINCE GEORGE, B.C.

VANCAL 11927

REVISED	WITCH NORTH
	CLAIM MAP
PROJ No.	SURVEY BY: T Campbell DATE: March 90
N.T.S. 93N2	DRAWN BY: T Campbell SCALE: 1:50,000
DWG. No. 2	NORANDA EXPLORATION
	OFFICE: Prince George, BC

GRID

A recon soil grid was flagged and compassed. The grid consists of seven lines 400 metres apart with a sampling interval of 50 metres. The lines originate from a Rio Algom cut baseline immediately west of the WN claim group. The grid was established to cover the area identified as the airborne mag high.

REGIONAL GEOLOGY

The most recent published information on regional geology is by Paterson, I.A., 1974 G.S.C. Paper 74-1, Part B.

The Witch North claim group lies in a broad northwest trending package of rocks known as the Quesnel Trough within the intermontagne tectonic belt of the Canadian Cordillera. These include Upper Triassic to Lower Jurassic aged Takla Group rocks consisting of a volcanic sequence of andesitic and basaltic flows, tuffs, breccias and agglomerates interbedded with conglomerates, greywackes, limestones and shales. These have been intruded by the Upper Jurassic to Lower Cretaceous aged Hogem Batholith and intrusive Omineca. Garnett describes the Hogem Batholith as being composed of at least 3 phases of varying chemical composition. Phase I granodiorite and Phase III granite are characterized as calcalkaline while Phase II syenite and Phase I basic suite are predominantly alkaline.

Copper mineralization is associated with syenitic intrusions of the Hogem Batholith in a number of areas.

The main structural feature is the northwesterly trending Pinchi Fault to the west of Chuchi Lake that forms the western boundary of the Hogem Batholith. Secondary lineaments having similar trends that can be recognized on air photos are probably fault related structures. It is probable that the anomalous east-west trend of Chuchi and Tchentlo lakes represents a cross cutting structural trend.

PREVIOUS WORK

1971 - Canwex Exploration (NPL) carried out some soil sampling on the Eve 1-8 claims located on the south shore of Chuchi Lake.

1971 - Agilis Exploration carried out mapping, geochemical and magnetometer surveys on the D and MT claim groups for Attila Resources.

1972 - Pechiney Development Ltd. carried out geochemical and magnetometer surveys on the PU group of claims on north shore of Witch Lake.

1972 - Agilis Exploration, expanded their earlier geochemical and magnetometer surveys.

1973 - Pechiney Development Ltd., conducted an IP survey on the PU claims.

1974 - Pechiney Development Ltd., detailed geochemical, geophysical surveys and 3 diamond drill holes on the PU claims.

GEOCHEMISTRY

Soils - Method:

During the 1989 field season, 229 soil samples were collected from the WN 1-4 group of claims. The samples were taken from the "B" horizon, 15-30 cm in depth, placed in wet-strength kraft bags, dried and shipped to Noranda's laboratory at 1050 Davie St., Vancouver, B.C. The samples were analyzed for gold and copper. The results are plotted on Figures 3 & 4, located in the pockets at the rear of the report.

Soils - Observations:

Copper: The copper values range from 6 to 680 ppm; there are 27 samples that are considered to be anomalous.

Location	Cu (ppm)
L4400N, 7000E	162
7300E	188
7550E	182
7750E	330
8600E	102
9150E	232
L4800N, 7150E	152
7250E	142
7300E	220
8150E	104
8200E	310
8250E	162
8450E	160
8500E	490
L6000N, 8100E	104
11100E	124
L6400N, 7550E	122
8000E	140
8500E	188
8750E	100
8900E	110
10200E	144
L6800N, 8250E	172
9400E	134
9450E	680
L7200N, 9800E	190
10150E	100

Gold: The values for gold range from 5 to 440 ppb; there are 8 samples considered to be anomalous.

Location	Au (ppb)
L4400N, 6900E	40
7300E	440
8600E	40
L4800N, 8250E	30
L6000N,10400E	260
L7200N,11100E	75
L7600N, 8850E	35
10000E	30

CONCLUSIONS

The recon soil geochemistry program has identified a few spotty, isolated anomalies on the grid. There appears to be a concentration of anomalous copper values on the two southern most lines. There is no pattern or trend to the anomalies.

RECOMMENDATIONS

1. Establish mini grids (lines 100metres apart, sample intervals of 25 metres) around the anomalies on the southern half of the grid.

2. Complete a small I.P. recon program of two lines on lines 6400N and 6800N.

3. Complete the 5200N and 5600N lines on the recon grid.

REFERENCES

Berthault, B., 1972: Geochemical and Geophysical Surveys on the PU Claims, Pechiney Development Ltd., BCDM Ass. Rpt. #3853.

Garnett, J.A., 1978: Geology and Mineral Occurrences of the Southern Hogem Batholith, Bulletin 70, MEMPR.

Guelpa, J. P., 1974: Assessment Report on the PU group of claims, Pechiney Development Ltd., BCDM Ass. Rpt. #5145.

Hallof, P.G., 1973: Geophysical Survey on the PU group of claims, Pechiney Development Ltd., BCDM Ass. Rpt. #5145.

Patterson, I.A., 1974: G.S.C. Paper 74-1 Part B

Philip, R.D.H., 1971: Geological and Geophysical surveys on the MT and D groups of claims, for Attila Resources, BCDM Ass. Rpt. #3851.

Smellie, D.W., 1971: Geochemical Report on the Eve group of claims, Canwex Exploration (NPL), BCDM Ass. Rpt. #3468.

Taylor, D.P., 1972: Geochemical Report on the MT and D group of claims for Attila Resources, BCDM Ass Rpt. #3852.

Taylor, D.P., 1972: Geochemical and Magnetometer surveys report on the MT and D group of claims, for Attila Resources, BCDM Ass. Rpt. #4244.

STATEMENT OF COSTS

A.	WAGES:	
	Soil sampling - 14 mandays @ $105/day	$ 1,470.00
	Line cutting - 8 mandays @ $125/day	$ 1,000.00
B.	FOOD, ACCOMMODATION & TRANSPORTATION:	
	22 mandays @ $55/day	$ 1,210.00
C.	ANALYSIS:	
	229 soils @ $8.60/sample	$ 1,969.40
D.	REPORT PREPARATION:	
	Author	$ 200.00
	Drafting	$ 200.00
	Typing	$ 50.00
		==========
	TOTAL COST:	$ 6,099.40

COST BREAKDOWN

A.	SOIL SAMPLING:	
	Wages	$ 1,470.00
	Accommodation, etc.	$ 770.00
	Analysis	$ 1,969.40
	Report	$ 450.00
		$ 4,659.40
B.	LINE CUTTING:	
	Wages	$ 1,000.00
	Accommodation, etc.	$ 440.00
		$ 1,440.00
		==========
		$ 6,099.40

APPENDIX II

STATEMENT OF QUALIFICATIONS

I, Terrence Campbell, of Prince George, Province of British Columbia, do hereby certify that:

1. I am a geologist residing at 6634 Essex Crescent, Prince George, British Columbia.

2. I am a 1985 graduate of the University of British Columbia, B.Sc. (Geology).

3. I am a member in good standing of the British Columbia Yukon Chamber of Mines.

4. I presently hold the position of Field Geologist with Noranda Exploration Company, Limited (no personnal liability) and have been in their employ since 1986.

Terrence Campbell

APPENDIX III

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

Revised:01/86

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver. (March, 1984)

Preparation of Samples

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples) are analysed in its entirety, when it is to be determined for gold without further sample preparation. See addendum.

Analysis of Samples.

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.2 g or less depending on the matrix of the rock, and twice as much acid is used for decomposition than that is used for silt or soil.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn (all the group A elements of the fee schedule) can be determined directly from the digest (dissolution) with an atomic absorption spectrometer (AA). A Varian-Techtron Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Elements Requiring Specific Decomposition Method

Antimony - Sb: 0.2 g sample is attacked with 3.3 mL of 6% tartaric acid, 1.5 mL conc. hydrochloric acid and 0.5 mL of conc. nitric acid, then heated in a water bath for 3 hours at 95° C. Sb is determined directly from the acid solution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.4 g sample is digested with 1.5 mL of 70 % perchloric acid and 0.5 mL of conc. nitric acid. A Varian AA-475 equipped with an As-EDL measures the arsenic concentration of the digest.

Barium - Ba: 0.1 g sample is decomposed with conc. perchloric, nitric and hydrofluoric acid. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 g - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest into the flame of the AA instrument c/w EDL.

Gold - Au: 10.0 g sample (Pan-concentrates see below) is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with Methyl iso-Butyl ketone (MIBK) from the aqueous solution. Gold is determined from the MIBK solution with flame AA.

Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the range of atomic absorption. The AA-475 with a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

Uranium - U: An aliquot, taken from a perchloric-nitric (3:1) decomposition, usually from the multi-element digestion, is diluted with water and a phosphate buffer. This solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01 (10PPB)
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

APPENDIX IV

GEOCHEMICAL RESULTS

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: STUART LK GOLD (WITCH NORTH) CODE : 8911-013

Project No. :283 Sheet:1 of 4 Date rec'd:NOV.06
Material :194 SOILS Geol.:G.R. Date compl:NOV.16
Remarks :

Values in PPM, except where noted.

T.T. No.	SAMPLE No.	Cu	PPB Au
94	6000N-6950E	20	5
95	7000	34	5
96	7150	32	5
97	7200	6	5
98	7250	22	5
99	7300	24	5
100	CHECK NL-6	56	-
101	7350	60	5
102	7400	44	5
103	7450 A	94	5
104	7450 B	24	5
105	7500	18	5
106	7550	30	5
107	7600	76	5
108	7700	34	5
109	7850	42	5
110	8000	34	5
111	8100	104	5
112	8150	32	5
113	8200	34	5
114	8250	26	5
115	8300	18	5
116	8550	12	5
117	8600	26	5
118	8650	48	5
119	8700	36	5
120	8750	32	5
121	8800	32	5
122	8850	30	5
123	8900	24	5
124	8950	26	5
125	9200	74	5
126	9250	56	5
127	9350	44	5
128	9400	22	5
129	9450	16	5
130	9500	28	5
131	9550	22	5

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T. T. No.	SAMPLE No.	Cu	PPB Au
1	6000N-10500E	42	5
1	10550	42	5
144	10600	44	5
145	10650	50	5
146	10800	40	5
147	11100	124	5
148	6000N-11150E	14	5
149	6400N-7050E	40	5
150	7100	14	5
2	7150	26	5
3	7200	42	5
4	7250	18	5
5	7300	10	5
6	7350	14	5
7	7400	12	5
8	7450	24	5
9	7500	58	5
10	7550	122	5
11	7600	64	5
12	7700	34	5
13	7750	24	5
14	7800	22	5
15	7950	74	5
16	8000	140	5
17	8050	52	5
18	8100	62	5
[illegible]	8150	60	5
[illegible]	8200	72	5
21	8250	36	5
22	8300	54	5
23	8400	24	5
24	8500	188	5
25	8550	26	5
26	8600	92	5
27	8650	32	5
28	8700	30	5
29	8750	100	5
30	8800	30	5
31	8850	30	5
32	8900	110	5
33	8950	38	5
34	9000	50	5
35	9150	48	5
36	9250	72	5
37	9300	56	5
38	9350	42	5
39	9400	32	5
40	9600	24	5

T.T. No.	SAMPLE No.	Cu PPB	Au
[illegible]	6800N-7050E	18	5
[illegible]	7100	34	5
52	7150	24	5
53	7200	12	5
54	7250	8	5
55	7300	24	5
56	7350	14	5
57	7400	38	5
58	7450	20	5
59	7500	72	5
60	7950	74	5
61	8150	40	5
62	8250	172	5
63	8500	74	5
64	8600	32	5
65	8700	46	5
66	8800	16	5
67	8850	22	5
68	9100	30	5
69	9150	28	5
70	9200	26	5
71	9250	10	5
72	9400	134	5
73	9450	680	5
74	9600	78	5

T. T. No.	SAMPLE No.	Cu	PPB Au	8911-013 Pg. 4 of 4
98	7600N-7800E	12	5	
	7850	54	5	
100	CHECK NL-6	54	-	
101	7900	24	5	
102	8050	38	5	
103	8150	22	5	
104	8250	22	5	
105	8300	26	5	
106	7600N-8350E	26	5	
107	7600N-8550E	18	5	
108	8600	20	5	
109	8650	20	5	
110	8700	28	5	
111	8850	112	35	
112	8900	34	5	
113	8950	28	5	
114	9000	42	5	
115	9100	24	5	
116	9150	52	5	
117	9400	44	5	
118	9450	40	5	
119	9500	36	5	
120	9550	20	5	

NORANDA VANCOUVER LABORATORY

PROPERTY/LOCATION: STUART Au (WITCH NORTH) CODE : 8911-020

Project No. :283 Sheet:1 of 3 Date rec'd:NOV.09
Material :135 SOILS Geol.:G.R. Date compl:NOV.23
Remarks :

Values in PPM, except where noted.

T.T. No.	SAMPLE No.	Cu	PPB Au
2	44000N-6900E	58	40
3	6950	42	5
4	7000	162	5
5	7250	14	5
6	7300	188	440
7	7350	64	20
8	7400	40	5
9	7450	90	5
10	7550	182	5
11	7600	72	5
12	7750	330	5
13	7900	34	10
14	7950	28	5
15	8300	34	5
16	8500	54	5
17	8550	28	5
18	8600	102	40
19	8650	16	5
20	9000	42	5
21	9050	44	5
22	9100	46	5
23	9150	232	5
24	9200	28	5
25	9250	48	5
26	9300	22	5
27	9350	22	5
28	9400	20	5
29	9600	20	5
30	[illegible]	[illegible]	[illegible]
31	[illegible]	[illegible]	[illegible]
32	[illegible]	[illegible]	[illegible]
33	44000N-[illegible]	[illegible]	[illegible]
34	48000N-6900E	38	5
35	6950	42	5
36	7000	40	5
37	7050	70	5
38	7150	152	5
39	7250	142	5
40	7300	220	15
41	7350	56	5
42	7400	78	5
43	7500	56	5
44	7550	50	5
45	7600	30	5
46	7650	30	5
47	7700	90	5
48	7750	26	5
49	48000N-7850E	32	5

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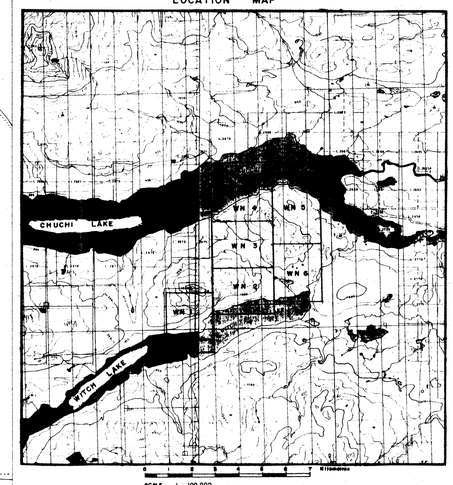
T.T. No.	SAMPLE No.	Cu	PPB Au
50	48000N-7900E	32	5
[illegible]	7950	18	5
52	8050	34	5
53	8100	70	5
54	8150	104	5
55	8200	310	5
56	8250	162	30
57	8350	34	5
58	8400	28	5
59	8450	160	10
60	8500	490	5
61	8550	64	5
62	8600	56	5
63	8650	26	5
64	8700	18	5
65	8750	42	5
66	8900	48	5
67	8950	38	5
68	9000	62	5
69	9100	34	5
70	9150	24	5
71	9200	40	5
72	[illegible]	[illegible]	[illegible]
73	[illegible]	[illegible]	[illegible]
74	[illegible]	[illegible]	[illegible]
75	[illegible]	[illegible]	[illegible]
76	[illegible]	[illegible]	[illegible]
[illegible]	48000N-[illegible]	[illegible]	[illegible]
78	72000N-6900E	46	5
79	7050	34	5
80	7150	28	5
81	7200	28	5
82	7250	80	5
83	7400	44	5
84	7550	22	5
85	7600	16	5
86	7650	22	5
87	7750	26	5
88	7800	26	5
89	7850	24	5
90	7900	48	5
91	7950	34	5
92	8000	46	5
93	8200	62	5
94	8250	34	5
95	8350	34	10
96	8400	20	5
97	8450	32	5
98	8500	28	5
99	8550	52	5
100	CHECK NL-5	54	-
101	8600	18	5
[illegible]	8650	14	5
[illegible]	8700	18	10
104	8750	58	5
105	8950	88	5
106	72000N-9000E	42	5

T.T. No.:	SAMPLE No.	Cu	PPB Au
[illegible]	72000N-9050E	26	5
[illegible]	9100	10	5
109	9150	26	5
110	9200	42	5
111	9250	38	5
112	9350	66	5
113	9400	60	5
114	9500	46	5

LOCATION MAP



CHUCHI LAKE

6700E 6900E BASELINE 0° 7100E 7500E 7900E 8300E 8700E 9100E 9500E 9900E 10300E 10700E 11100E 11500E

7600N
7200N
6800N
6400N
6000N
4800N
4400N

WN 4 WN 5 WN 6 WN 3 WN 2 WN 1

L.C.P.

1322m

1000

WITCH LAKE

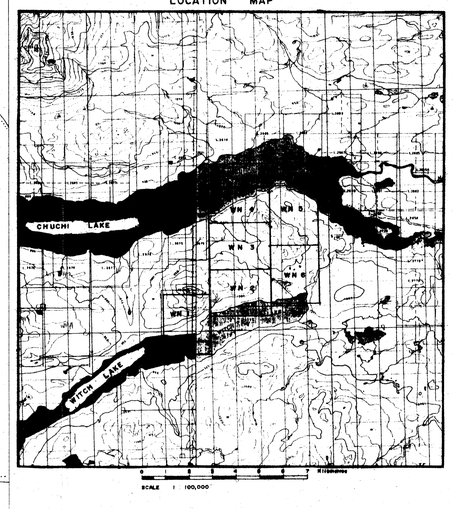
GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,008

0 500 1000 m
SCALE 1 10,000

REVISED	WITCH LAKE
	WN 1-6 CLAIMS
	SOIL GEOCHEM SURVEY
	Cu (ppm)
PROJ. No.	SURVEY BY: G. R. DATE: Oct., 1989
N.T.S. 93 N/1,2	DRAWN BY: S. K. B. SCALE: 1: 10,000
DWG. No. FIG. 4	NORANDA EXPLORATION
	OFFICE PRINCE GEORGE, B.C.

LOCATION MAP



CHUCHI LAKE

WITCH LAKE

6900E BASELINE 0°

6700E 7100E 7500E 7900E 8300E 8700E 9100E 9500E 9900E 10300E 10700E 11100E 11500E

7600N 7200N 6800N 6400N 6000N 4800N 4400N

WN 1 WN 2 WN 3 WN 4 WN 5 WN 6

1323 m

1000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,008

0 500 1000 m
SCALE 1 10,000

REVISED	WITCH LAKE
	WN 1-6 CLAIMS
	SOIL GEOCHEM SURVEY
	Au (ppb)
PROJ. No.	SURVEY BY: G.R. DATE: Oct., 1989
N.T.S. 93N/1,2.	DRAWN BY: S.K.B SCALE: 1 10,000
DWG. No. FIG. 3	NORANDA EXPLORATION
	OFFICE PRINCE GEORGE, B.C.